



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,451	07/27/2006	Ryuichiro Amano	DK-US065159	2263
22919 7590 03/17/2010 GLOBAL IP COUNSELORS, LLP 1233 20TH STREET, NW, SUITE 700 WASHINGTON, DC 20036-2680			EXAMINER ZOLLINGER, NATHAN C	
			ART UNIT 3746	PAPER NUMBER
			MAIL DATE 03/17/2010	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/587,451	<b>Applicant(s)</b> AMANO, RYUICHIRO	
	<b>Examiner</b> NATHAN ZOLLINGER	<b>Art Unit</b> 3746	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 February 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 4-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**Detailed Action**

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 22, 2010 has been entered.

***Response to Amendment***

Applicant's amendments filed on February 22, 2010 have been entered. Claims 1 and 5-6 have been amended. Claims 1 and 4-6 are therefore pending in this application.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchibori et al. (US 5,666,015) in view of Kost (US 2,321,755) and in further view of Neill (US 3,505,923).

**Claim 1:** Uchibori discloses a compressor, comprising a closed container (1) a compressor element section (3) housed in a lower portion of the closed container, and an electric motor element section (2) housed in an upper portion of the closed container, and including a rotor (5) a stator (4) disposed on an outer periphery of the rotor, an end plate (30) provided on an end surface of the rotor, and an oil separation plate (26) installed on the end plate and forming a through hole (Fig. 1, end regions of 26), the end plate including a main section (30), and a projection (31) projecting from the main section and fitted in the through hole, the projection including a projected part projected from the through hole of the oil separation plate. Uchibori does not disclose that the projection is crushed to integrate the oil separation plate (26) with the end plate (30). However, Kost teaches a crushed projection (Fig. 3). Specifically, Kost teaches inserting a projection into an aperture of a plate and then crushing the projection to create a connection, which operation simplifies the fastening process (col. 1, lines 5-19). It would be obvious to employ crushed projections as taught by Kost into the compressor of Uchibori in order to secure the oil plate and simplify the process of attaching the oil plate to the end plate. Additionally, Uchibori does not disclose a recess on an upper face of the projection which is cone-shaped and which remains (at least a bottom portion) after being crushed. Neill teaches a projection with a cone-shaped recess (32, Figs. 1 and 4, Examiner broadly interprets "cone-shaped recess" to possibly

Art Unit: 3746

include the shape outlined by both 40 and 36; col. 3, lines 17-19, 27, Examiner also notes that the conical recess could reasonably include radiused portion, 36), which recess (or a bottom portion) remain after being crushed (32, Figs. 7 and 9, Examiner notes that in Fig. 9 the conical wall 40 remains even after crushing). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a recess as taught by Neill into the compressor of Uchibori since such a recess acts to cause a uniform flow of material throughout the projection, improving the strength of the projection (col. 3, lines 48-63). Moreover, the recess prevents the head portion from being at an undue thickness near the collar section (col. 3, lines 49-51) ensuring that a uniform flow of material exists throughout the fastener, which improves the overall strength of the projection and avoid commonly encountered fracture lines (Figs. 4-5, col. 3, lines 49-63).

**Claim 4:** Uchibori, Kost and Neill teach the limitations of claim 1, discussed previously. Uchibori also discloses a compressor wherein a material of the projection is made from aluminum (col. 6, lines 40-43).

**Claim 5:** Uchibori discloses a method of plate installation comprising mounting a plate member (26) on a supporting base plate (30) by fitting a projection (31) of the supporting base plate into a through hole of the plate member to project a top end part of the projection from the through hole (col. 6, lines 45-47), the plate and projection being made from aluminum (col. 6, lines 40-43). Uchibori does not disclose crushing a projected part of the projection from the through hole so as to integrate the plate member with the supporting base plate. However, Kost teaches such a feature.

Art Unit: 3746

Specifically, Kost teaches inserting a projection into an aperture of another plate and then crushing the projection to create a connection, which operation simplifies the fastening process (col. 1, lines 5-19). It would be obvious to employ crushed projections as taught by Kost into the compressor of Uchibori in order to secure the oil plate and simplify the process of attaching the oil plate to the end plate. Additionally, Uchibori does not disclose a projection with a cone-shaped recess that retains a bottom portion after crushing. However, Neill teaches a projection with a cone-shaped recess (32, Figs. 1 and 4, Examiner broadly interprets "cone-shaped recess" to possibly include the shape outlined by both 40 and 36; col. 3, lines 17-19, 27, Examiner also notes that the conical recess could reasonably include radiused portion, 36), which recess (or a bottom portion) remain after being crushed (32, Figs. 7 and 9, Examiner notes that in Fig. 9 the conical wall 40 remains even after crushing). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a recess as taught by Neill into the compressor of Uchibori since such a recess acts to cause a uniform flow of material throughout the projection, improving the strength of the projection (col. 3, lines 48-63). Moreover, the recess prevents the head portion from being at an undue thickness near the collar section (col. 3, lines 49-51) ensuring that a uniform flow of material exists throughout the fastener, which improves the overall strength of the projection and avoid commonly encountered fracture lines (Figs. 4-5, col. 3, lines 49-63).

**Claim 6:** Uchibori discloses a compressor, comprising a closed container (1) a compressor element section (3) housed in a lower portion of the closed container, and

Art Unit: 3746

an electric motor element section (2) housed in an upper portion of the closed container, and including a rotor (5) a stator (4) disposed on an outer periphery of the rotor, an end plate (30) provided on an end surface of the rotor, and an oil separation plate (26) installed on the end plate and forming a through hole (Fig. 1, end regions of 26), the end plate including a main section (30), and a projection (31) projecting from the main section and fitted in the through hole, the projection including a projected part projected from the through hole of the oil separation plate. Uchibori does not disclose that the projection is crushed to integrate the oil separation plate (26) with the end plate (30). However, Kost teaches a crushed projection (Fig. 3). Specifically, Kost teaches inserting a projection into an aperture of a plate and then crushing the projection to create a connection, which operation simplifies the fastening process (col. 1, lines 5-19). It would be obvious to employ crushed projections as taught by Kost into the compressor of Uchibori in order to secure the oil plate and simplify the process of attaching the oil plate to the end plate. Additionally, Uchibori does not disclose a cone-shaped recess on the projection in which a bottom portion of the recess remains after being crushed. Neill teaches a projection with a cone-shaped recess (32, Figs. 1 and 4, Examiner broadly interprets "cone-shaped recess" to possibly include the shape outlined by both 40 and 36; col. 3, lines 17-19, 27, Examiner also notes that the conical recess could reasonably include radiused portion, 36), in which the recess (or a bottom portion) remains after being crushed (32, Figs. 7 and 9, Examiner notes that in Fig. 9 the conical wall 40 remains even after crushing). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a

Art Unit: 3746

recess as taught by Neill into the compressor of Uchibori since such a recess acts to cause a uniform flow of material throughout the projection, improving the strength of the projection (col. 3, lines 48-63). Moreover, the recess prevents the head portion from being at an undue thickness near the collar section (col. 3, lines 49-51) ensuring that a uniform flow of material exists throughout the fastener, which improves the overall strength of the projection and avoid commonly encountered fracture lines (Figs. 4-5, col. 3, lines 49-63). Neill further teaches a recess with an outer diameter of about 50 percent of an outer diameter of the projection and a depth of 10-15 percent of the diameter of the projection (Figs. 4, 6-7 and 9).

Claims 1 and 4-5 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over Uchibori et al. (US 5,666,015) in view of Kost (US 2,321,755) and in further view of Speakman (US 3,936,205).

**Claim 1:** Uchibori discloses a compressor, comprising a closed container (1) a compressor element section (3) housed in a lower portion of the closed container, and an electric motor element section (2) housed in an upper portion of the closed container, and including a rotor (5) a stator (4) disposed on an outer periphery of the rotor, an end plate (30) provided on an end surface of the rotor, and an oil separation plate (26) installed on the end plate and forming a through hole (Fig. 1, end regions of 26), the end plate including a main section (30), and a projection (31) projecting from the main section and fitted in the through hole, the projection including a projected part projected from the through hole of the oil separation plate. Uchibori does not disclose that the projection is crushed to integrate the oil separation plate (26) with the end plate (30).



Art Unit: 3746

However, Kost teaches a crushed projection (Fig. 3). Specifically, Kost teaches inserting a projection into an aperture of a plate and then crushing the projection to create a connection, which operation simplifies the fastening process (col. 1, lines 5-19). It would be obvious to employ crushed projections as taught by Kost into the compressor of Uchibori in order to secure the oil plate and simplify the process of attaching the oil plate to the end plate. Additionally, Uchibori does not disclose a recess on an upper face of the projection which is cone-shaped and which remains (at least a bottom portion) after being crushed. Speakman teaches a cone-shaped recess (41) and a bottom portion which remains after crushing (col. 4, lines 19-22). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a recess as taught by Speakman so that the recess “can later act as an identifier or as a center if it is desired to drill out the [projection]” (col. 4, lines 19-22).

**Claim 4:** Uchibori, Kost and Speakman teach the limitations of claim 1, discussed previously. Uchibori also discloses a compressor wherein a material of the projection is made from aluminum (col. 6, lines 40-43).

**Claim 5:** Uchibori discloses a method of plate installation comprising mounting a plate member (26) on a supporting base plate (30) by fitting a projection (31) of the supporting base plate into a through hole of the plate member to project a top end part of the projection from the through hole (col. 6, lines 45-47), the plate and projection being made from aluminum (col. 6, lines 40-43). Uchibori does not disclose crushing a projected part of the projection from the through hole so as to integrate the plate member with the supporting base plate. However, Kost teaches such a feature.

Art Unit: 3746

Specifically, Kost teaches inserting a projection into an aperture of another plate and then crushing the projection to create a connection, which operation simplifies the fastening process (col. 1, lines 5-19). It would be obvious to employ crushed projections as taught by Kost into the compressor of Uchibori in order to secure the oil plate and simplify the process of attaching the oil plate to the end plate. Additionally, Uchibori does not disclose a projection with a cone-shaped recess that retains a bottom portion after crushing. Speakman teaches a cone-shaped recess (41) and a bottom portion which remains after crushing (col. 4, lines 19-22). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ a recess as taught by Speakman so that the recess "can later act as an identifier or as a center if it is desired to drill out the [projection]" (col. 4, lines 19-22).

### ***Response to Arguments***

Applicant's arguments filed February 22, 2010 have been fully considered but they are not persuasive. Applicant has amended the claims to include a bottom portion which remains after being crushed. Examiner agrees that surface 18 no longer qualifies under the new claim language. However, Examiner disagrees with Applicant regarding the recess 32. On one point, Applicant contends that the explicit conical section 40 disappears after being crushed. While this is depicted in Fig. 7, Examiner reminds Applicant of Fig. 9, in which the conical surface *endures* even after crushing (see col. 4, lines 66-72). Importantly, then, this conical surface has a bottom portion that would remain even after being crushed as depicted in Figure 9. Alternatively, Examiner could

Art Unit: 3746

choose to interpret "cone-shaped" broadly to incorporate the collective shape of both 36 and 40. As mentioned in the previous Final Action, Examiner reasons that the frustum recess 32 both: (i) broadly qualifies as a cone-shaped recess and (ii) remains in the projection after the projection is crushed (Figs. 4, 6-7 and 9). Under this interpretation, then, even though a portion of the recess disappears in Figure 7, a remaining bottom portion (34) remains even after being crushed. As detailed in the above rejections, motivation can be found in the desire to create a uniform flow of material, strengthening the joint. As a last alternative, Examiner further submits Speakman (US 3,936,205) which teaches a cone-shaped recess on a projection that remains even after being crushed so that it may act as a guide for subsequent drill-out operations.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN ZOLLINGER whose telephone number is 571-270-7815. The examiner can normally be reached on Monday - Thursday, 9 a.m. - 4 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3746

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. Z./  
Examiner, Art Unit 3746

/Devon C Kramer/  
Supervisory Patent Examiner, Art  
Unit 3746